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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,826	09/24/1999	MICHAEL J. HAWTHORNE	509/35644	8826

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EXAMINER

KISS, ERIC B

ART UNIT

PAPER NUMBER

2122

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/404,826

Applicant(s)

HAWTHORNE ET AL.

Examiner

Eric B. Kiss

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 46-50 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 15-29, and 46-50 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1, 2, 8. 6) ☐ Other:

DETAILED ACTION

1. Applicant elected Group 1, consisting of claims 1-11, 15-29, and 46-50 with traverse and cancelled claims 30-45.

Claims 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Accordingly, claims 1-11, 15-29, and 46-50 are now being examined on the merits.

Information Disclosure Statement

2. The information disclosure statement filed on November 8, 1999 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the publication listed is not identified by date and place of publication. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Specification

3. The disclosure is objected to because of the following informalities: On page 6, line 22, "Figures 1" should read "Figure1".

Appropriate correction is required.

Claim Objections

4. Claim 26 is objected to because the plural noun "claims" should instead read as the singular noun "claim".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "connected to a respective on-board computer" in line 3, but the claim later recites plural "on-board computers" in lines 5 and 7. It is assumed that plural

Art Unit: 2122

on-board computers is intended, and accordingly, the cited limitation in line 3 of claim 10 is subsequently treated as reading "each connected to a respective on-board computer" for the purpose of further examination.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 3, 5-11, 15-19, 22, 23, 27-29, and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,786,998 to Neeson et al.

As per claim 1, Neeson teaches determining if a remote station is within range (see column 7, line 63 through column 8, line 3), establishing wireless communication between an on-board computer (field unit) and a remote station (base station; see column 7, lines 29-47), and determining whether the computer has files to be transferred and transferring the files to the remote station (see column 4, line 33 through column 5, line 15).

As per claims 2 and 3, Neeson teaches determining whether a remote station has updates to be transferred and transferring the updates, including software updates (configuration changes) to the on-board computer (see column 19, lines 49-67).

Art Unit: 2122

As per claim 5, Neeson further teaches determining the location of the train and the location of the next remote station (receiving base station; see column 7, line 63 through column 8, line 3).

As per claim 6, Neeson further teaches transmitting a wireless query and monitoring for a response (loss of mobile contact/acquired mobiles; see column 21, lines 42-48).

As per claim 7, Neeson further teaches resuming file transfers during subsequent communication sessions after an interruption of wireless communication (see column 14, line 10 through column 15, line 34).

As per claims 8 and 9, Neeson further teaches files including data from plural event recorders (intelligent devices) that transfer data to the on-board computer (processing device; see column 4, lines 44-57).

As per claim 10, Neeson further teaches the plural event recorders each connected to a respective on-board computer (intelligent devices have computer processing – “receive and understand” capabilities; see column 2, lines 5-27), establishing wireless communication between the on-board computers (intelligent devices) and the remote station (intelligent devices communicate to the base stations via the processing device), and transferring event recorder data from each of the on-board computers to the remote station (see column 4, line 33 through column 5, line 15).

As per claim 11, Neeson further teaches files including train performance data (speed and control information; see column 8, lines 11-24).

Art Unit: 2122

As per claim 15, Neeson further teaches establishing communication between a remote station (base station) and a home base station (front end processor), and determining what files need to be transferred and transferring the files (see column 8, lines 11-18 and lines 40-44).

As per claim 16, Neeson further teaches transferring operational data for the onboard computer (traffic control information; see column 8, lines 18-24) from the home base station (front end processor) to the remote station (base station).

As per claims 17 and 18, Neeson further teaches transferring operation information of the remote station, including locomotives contacted (locomotive ID) from the remote station (base station) to the home base station (front end processor; see column 12, lines 50-67).

As per claim 19, Neeson further teaches establishing communication between the remote station (base station) and the home base station (front end processor) when requested by a user or according to a schedule (see column 10, lines 19-24).

As per claim 22, Neeson teaches responding to various trigger events to determine that a transfer is needed (see column 10, lines 16-24), establishing communication between a remote station (base station) and a home base station (front end processor), and determining what files need to be transferred and transferring the files (see column 8, lines 11-18 and lines 40-44).

As per claim 23, Neeson further teaches transferring a callbook (cluster controller data) to the remote station that defines with which remote stations an on-board computer will initiate communication (see column 7, lines 48-63).

As per claim 27 and 28, Neeson further teaches transferring on-board computer files (Locomotive Equipment Tables) and operation information of the remote station, including

Art Unit: 2122

locomotives contacted (locomotive ID) from the remote station (base station) to the home base station (front end processor; see column 12, lines 50-67).

As per claim 29, Neeson further teaches the home base station (front end processor) using the onboard computer files for report generation (see column 8, lines 24-44) and archival (see column 12, lines 54-57).

As per claim 50, Neeson teaches establishing communication between a computer on a train and remote stations (base stations) as the train moves along a track (see column 7, lines 29-39), transferring files from the remote stations (base stations) to the on-board computer (see column 19, lines 49-67), establishing communication between the remote station and the base station, and subsequently transferring on-board computer files (Locomotive Equipment Tables) from the remote station to the base station (front end processor; see column 12, lines 50-67).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claims 1 and 22 above, and further in view of U.S. Patent No. 5,848,064 to Cowan.

• Art Unit: 2122

As per claim 4, Neeson teaches transferring updates to the on-board computer (see column 19, lines 49-67) but fails to teach comparing the version of a file in the on-board computer to the version of a file in the remote station to affect what is transferred. However, Cowan teaches changing the operating software of mobile terminals by detecting a change in a software version identifier in a remote station (host computer) and transferring the change (new version) resulting from the comparison (see column 6, lines 41-51). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the software updating method of Neeson to include the version comparison of Cowan. One would be motivated to do so to ensure that on-board computer's software is kept up-to-date.

As per claims 24-26, Neeson teaches transferring updates to the on-board computer (see column 19, lines 49-67) but fails to teach comparing the version of a file in the remote station to the version of a file in the home base station, where a new software version triggers the transfer of the software update. However, Cowan teaches triggering a change in the operating software of mobile terminals by detecting a change in a software version identifier in a remote station (host computer) corresponding to a change in version information (Package Definition table) in a home base station (WAN host) and transferring the change (new version) resulting from the comparison the next time the mobile system boots up or attempts to download an update (see column 6, lines 41-51 and column 15, line 53 through column 16, line 14). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the software updating method of Neeson to include the base station (WAN host) version comparison and triggering of Cowan. One would be motivated to do so to perform automatic global software upgrades.

Art Unit: 2122

11. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,420,883 to Swensen et al.

As per claims 20 and 21, Neeson teaches transferring files between an on-board computer and a remote station (base station; see column 8, lines 11-24) but fails to teach transferring files between remote stations. However, Swensen teaches a hierarchical scheme in which remote stations (trackside radios) retransmit received messages to other, different level, remote stations within a subnet (see column 5, line 64 through column 6, line 29 and Figure 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to include the retransmitting scheme of Swensen. One would be motivated to do so to allow for contacting a train or remote station where a direct link is not possible.

12. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,785,283 to Ehrenberger et al.

As per claims 46 and 47, Neeson teaches transferring data from a remote station to an on-board computer and from an on-board computer to a remote station (base station; see column 8, lines 11-24) but fails to teach transferring track data or displaying track data on the train. However, Ehrenberger teaches transferring track data (wayside defects) from a remote station (wayside system) to an on-board computer (see Figure 1) and displaying the track data on the train (see column 3, lines 9 through 21). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to

Art Unit: 2122

include transferring track data to the on-board computer and displaying the track data as taught by Ehrenberger and subsequently transferring the track data to another remote station. One would be motivated to do so to keep the train operator informed of potential hazards in the area and to disseminate the information to other train operators in the system.

As per claim 48, in addition to the teachings applied above, Ehrenberger further suggests other types of track data, including status of a highway crossing analyzer (see column 6, lines 52-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the Neeson method to include track information such as crossing gate position or crossing occupancy status as per the suggestion of Ehrenberger. One would be motivated to do so to communicate a potential highway crossing hazard to the locomotive operator in advance of the train approaching the highway crossing.

As per claim 49, in addition to the teachings applied above, it would have been furthermore obvious to include correlating train performance data with track data, e.g. making a change in speed in response to a detected potential hazard.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (703) 305-7737. The

Art Unit: 2122

examiner can normally be reached on Tue. - Fri., 7:30 am - 5:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703) 308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703) 746-7239 (for formal communications intended for entry)


Or:

(703) 746-7240 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

EBK
September 20, 2002



TUAN Q. DAM
PRIMARY EXAMINER